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ABSTRACT OF THE DISCLOSURE TECHNOLOGY CENTER 2000

A semiconductor device for controlling electricity includes:

- (a) a metal base plate; and
- 5 (b) at least one insulating substrate including
 - (1) an insulator plate,
 - (2) a back-side pattern on a back face of the insulator plate, the back-side pattern being bonded to the metal base plate and
 - (3) two circuit patterns located on a front face of the insulator plate and above
- 10 the back-side pattern. Each of the circuit patterns is of a shape of a figure "L" and extending along two sides of the insulator plate that are continued and perpendicular to each other. The two circuit patterns are arranged at opposed corners of the insulator plate in a centrosymmetrical relation each other. In each circuit patterns, there is included a switching element sandwiched between
- 15 a free-wheel diode and a electrode area.